



23 March 2016 - Six of the ten longest growing seasons have occurred within the last 30 years

During the last 10 years the 'plant' growing season, according to the **Central England Temperature (CET)** record, has been on average 29 days longer than the reference climatology period 1961-1990, according to Met Office figures released on **World Meteorological Day** [23 March, 2016].

The **Met Office** records the length of the growing season as part of a set of UK climate statistics based on temperature. The CET record is the longest continuous temperature record in the world with monthly temperatures back to 1659 and a daily series back to 1772 allowing us to look at the growing season length over several centuries.

Doctor Mark McCarthy is the manager of the **National Climate Information Centre**, which is part of the **Met Office Hadley Centre**. Commenting on the growing season figures, he said: "The Central England Temperature record is an invaluable data set for measuring long-term changes in the climate.

"Between 1861 and 1890, the average growing season by this measure was 244 days, and measuring the same period a century later, the average growing season had extended by just over a week. For the most recent ten years between 2006 and 2015, the average growing season has been 29 days longer at 280 days when compared with the period between 1961 and 1990."

In addition to the longer growing season, the figures also reveal that six of the ten longest growing seasons in the CET record sequence have occurred in the last 30 years. At 336 days, the longest growing season in the sequence was 2014: tenth in the sequence was 2015 with 303 growing days.

By comparison, only three of the ten years with the shortest growing seasons have occurred within the last 100 years: 1979, 1941 and 1922. The years with the lowest recorded growing season were 1782 and 1859 with just 181 days.

In the UK, in addition to the length of the growing season, the CET series can also reveal other UK climatic trends, such as days of air frost, when the daily minimum temperature dips below 0C. The number of days of air frost has also been declining over recent decades. Since 1990 there have been seven years when the days of air frost exceeded the 1961 - 1990 average, these were 1991, 1996, 2001, 2003, 2009, 2010 and 2013. 2010 was particularly notable having the most days of frost since 1917.

For a UK-wide perspective using all weather station data across the country the Met Office has also identified that the average number of annual days of air frost across the UK as a whole during the period 2006-2015 has dropped by over 16.6% when compared with the period 1961-1990.

Doctor Mark McCarthy added: "Although we have fewer air frost days on average than we experienced a few decades ago, the numbers can still fluctuate from year to year. Many people will remember vividly the cold spells during 2010 and 2013. In contrast, 2014 recorded very few days of air frost and being the lowest in the UK series from 1961." 2014 was also the third lowest in the longer-running CET series. With just under 41 days of air frost in the UK, 2015 was still well below the 2006 -2015 average of just over 50 days.

There is a strong correlation between the number of air frost days in the UK and the prevailing weather conditions linked to a regular area of high pressure around the Azores, and a regular area of low pressure south of Greenland. When the difference between these two pressure areas is greatest, conditions are created which bring a stronger flow of damp, mild air into northern Europe, resulting in wet and windy winters. The reverse conditions bring cooler than average weather across northern Europe. The pressure gradient between the high and low pressure areas is known as the **North Atlantic Oscillation**.

Professor Adam Scaife of the Met Office studies long-term weather prediction, including the effects of the North Atlantic Oscillation. He said: "The North Atlantic Oscillation has a major influence on the winter weather of Europe and North America. When the pressure difference is weaker than usual our weather is more heavily influenced by winds from the east bringing cold and dry winters with more days of air frost."

"However, the flipside is when the North Atlantic Oscillation is positive, then our winters are dominated by weather from the west, bringing more frequent wind and rain and fewer frost days; this adds to the warming due to climate change and can produce record-breaking weather."

The Met Office is a member of the World Meteorological Organization. The theme of this year's World Meteorological Day, organised by the World Meteorological Organization, is: Hotter; Drier; Wetter. On World Meteorological Day, the WMO is citing examples of how the climate is changing around the globe.